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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,625	11/10/2005	Lucy M. MacGregor	DYOUP0281US	2020
7590 03/02/2007 Don W Bulson Renner Otto Boisselle & Sklar 19th Floor 1621 Euclid Avenue Cleveland, OH 44115			EXAMINER MCELHENY JR, DONALD E	
			ART UNIT 2857	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	
3 MONTHS			03/02/2007	
			DELIVERY MODE PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/521,625

Applicant(s)

MACGREGOR ET AL.

Examiner

Donald E. McElheny, Jr.

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 31-71 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 66 and 67 is/are allowed.
- 6) ☒ Claim(s) 31-65, 68-71 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 14 JAN 2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1-62 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter and the claimed invention lacks patentable utility.

Please be advised that the "Interim Guidelines for Examination of Patent Applications for Subject Matter Eligibility" was signed on Oct 26, 2005 and posted on the uspto.gov website. The link is:

<http://www.uspto.gov/web/offices/pac/dapp/ogsheet.html>

Also see updated (Eighth Edition, Revision 5 (August 2006)) MPEP 2106, which covers algorithm based and computer implemented inventions and the manner in which they may be claimed and find statutory basis under 35 U.S.C. 101.

These claims are directed to a inventive algorithm couched in method, computer and other implemented apparatus, and computer software based claims, which states the inventive gist as computations per se, to an algorithm per se, that lacks the algorithm results implemented into the real physical world.

Claims where the inventive gist is directed either explicitly only to an abstract idea, or verbal description of a mathematical algorithm, or to a computer running an abstract idea algorithm process, or general inventive algorithm process, and lack any requisite real world practical utility with either a physical transformation, or useful, tangible and concrete results, or the clear physical transformation into the real world of the calculated algorithm results, are considered non-statutory under the updated

"Guidelines". Note that under current updated Office policy even when exists a claimed physical input sensor supplies the real-world input data, or a computer system is recited, such does not place the claimed invention into the domain of statutory subject matter, but the claimed algorithmic based invention is analyzed under the Guidelines to determine if it meets the required statutory subject matter conditions set forth therein. Mere calculations (whether using a computer or not) upon data from a real world sensor without any explicit recitation in the claim body of transformation of the inventive algorithm into a real world or a useful, tangible and concrete result (i.e. real world practical utility, real world repeatable results, and real world physical results), are still non-statutory subject matter under the above noted new 101 practice.

Furthermore, claims 36, 43, 59, and 60 are directed to a "computer program product". This is not clearly directed to a statutory embodiment combination of computer software stored on a computer storage medium, and thus could be read as the software per se. While the claims recite "with machine readable instructions", such could be read as non-statutory embodiments such as signals and not a permanent computer data storage medium.

3. The following is a quotation of the second and fourth paragraphs of 35 U.S.C.

112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Subject to the following paragraph, a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

4. Claims 1-65 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims fail to completely set forth a real world practical use implementation or a useful, concrete and tangible result that is statutory subject matter in basis. For these reasons the claims therefore appear incomplete in claiming essential portions of the disclosed invention that includes a statutory subject matter implementation basis (if such exists in the specification as filed). The body of these claims appear to fail to ever accomplish an end result of any useful, concrete and tangible real world practical nature that is statutory subject matter based, and thus are unclear how and when such any inventive desired result and inventive purpose as set forth in their preamble is ever reached and accomplished. Throughout the claims the various calculations appear to never be further used, nor how they cooperate, for any useful real world end result that is a physical transformation into the real world, or a useful, concrete and tangible that is beyond a mere abstract idea or human actions that are mental thought process. Note that even when sensor sources and computer supported basis were explicitly recited for such calculations that the current updated computer implemented invention "Guidelines" state that such data gathering and calculation supportive structure/steps fail to give statutory weight to such type abstract idea or mathematical algorithm inventions.

Because the claims lack essential portions to support the invention as to support and meet a statutory basis criteria, they appear to be incomplete in setting forth the intended invention. Therefore, all claims appear as being incomplete for omitting

essential steps/structure for supporting such desired results and missing essential and necessary relationships and statutory subject matter criteria, and such omission amounting to a gap between the steps that are recited. See MPEP § 2172.01.

Claims 63-65 are also incomplete, as their preambles are directed to a submersible vehicle and yet the bodies of the claims never reference back nor support basis for such being accomplished. Why the list a multitude of limitations that have no cooperation and are not clear how they cooperate and relate to the subject of the preamble is unclear.

5. Claims 68-71 are rejected under 35 U.S.C. 112, second and fourth paragraphs, and objected to under 37 CFR 1.75(c) as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, and as being an improper dependent claim. See MPEP 2172.01.

These claims fail to clearly be directed to the subject matter of their parent claim and then further restrict and limit such subject matter. Instead they begin with different subject matter and create a new combination not the subject matter of their parent claim.

Subject to the fourth paragraph of 35 U.S.C. 112, a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers. These claims fail to comply with such fourth paragraph, as they begin with something entirely different than a prior claim and then add limitations including reference to a prior claim. And are also

indefinite as failing to comply with 112, second paragraph, since it cannot be determined what exactly applicant intends as the claimed combination to be covered.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The subject matter must remain directed to that of the originally presented invention (i.e. not restrictable).

6. Claims 66 and 67 stand allowed. The prior art fails to teach the combination.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald McElheny, Jr. whose telephone number is 571-272-2218. The examiner can normally be reached on Monday-Thursday from 7:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoff Marc, can be reached on weekdays at telephone number 571-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read 'D. McElheny, Jr.', with a stylized, cursive script.

Donald E. McElheny, Jr.
Primary Examiner
Art Unit 2857